

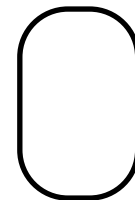
Linear relationships

The following questions refer to Exercises 6.4 to 6.6 in **Heinemann Maths Zone 9 VELS Edition**. If you are unsure of how to do a question, try looking at a worked example or other information in the section shown under the question number. Show all working in the space provided.

Name: _____

Class: _____ Due date: _____

Parent's signature/comment: _____



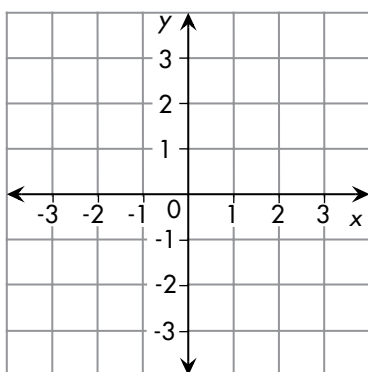
1

6.4

Use the y -intercept and gradient method to plot the graphs of these linear functions. Label each one.

(a) $y = -x + 3$

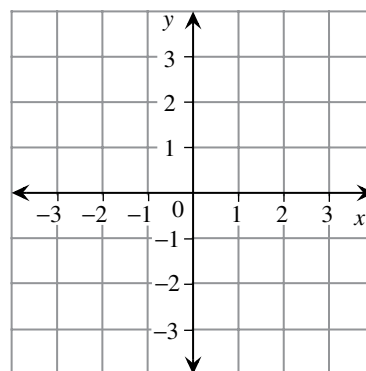
(b) $y = 0.5x - 1$



4

6.5

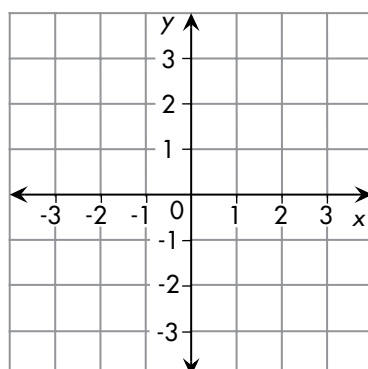
Use the results of Question 3 to plot the graph of the equation $3x - 2y = 6$ using the intercept method.



2

6.4

Rearrange the equation $4x + 3y = 6$ into the form $y = mx + c$, then use it to sketch the line on the grid.



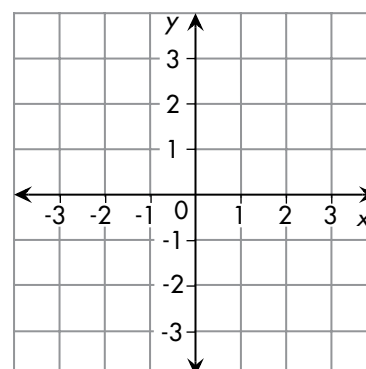
5

6.6

Use the most suitable method to sketch the graphs of these two equations.

(a) $3y = x$

(b) $2y + 4 = 3x$



3

6.5

(a) Find the x -intercept for the equation $3x - 2y = 6$.

(b) Find the y -intercept for the equation $3x - 2y = 6$.

(c) Find the gradient for the equation $3x - 2y = 6$.

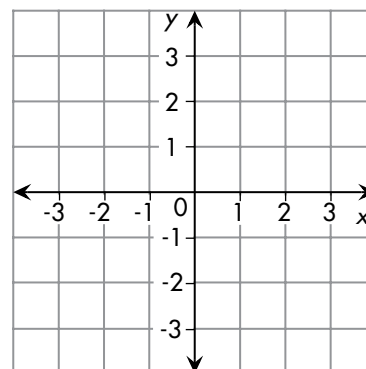
6

6.6

On the grid below sketch the graphs of the following equations.

(a) $y = 1.5$

(b) $x = -2.5$



Name the point they have in common _____.

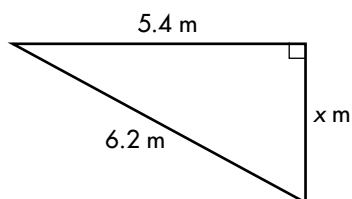


Replay questions

The following questions are from earlier chapters of the textbook or from last year. If you have difficulty, look at the relevant section or Replay Worksheet or ask your teacher. Show all your working in the space provided.

R1**3.4**

Find the value of x in this diagram. Give the answer correct to two decimal places.

**R3****4.5, 4.6**

Factorise these expressions.

(a) $24x - 30x^2$

(b) $3x^2 - 6x - 2xy + 4y$

R2**4.2**

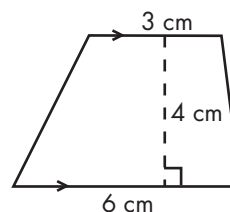
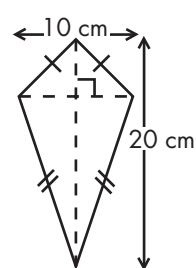
Expand and simplify these expressions.

(a) $4(3a - 2) - 5(2a + 1)$

(b) $7y(2y - 3) - 3(y + 1)$

R4**2.4**

Find the area of the following shapes.

(a)**(b)**

Problem solving: Something and a half, squared

‘Here’s a pattern you don’t know,’ boasted smart Alec.

$$1.5^2 = 2.25$$

$$2.5^2 = 6.25$$

$$3.5^2 = 12.25$$

‘So $10.5^2 = 110.25$, and $100.5^2 = 10\,100.25$,’ said Sue, who, as usual, was well ahead of Alec.

‘How did you do that?’ asked the stunned Alec.

Tell him.